

## ORIGINAL ARTICLE

# PUBLIC AWARENESS, INFORMATION SOURCES AND EVALUATION OF ORAL IMPLANT TREATMENT IN ALKHARJ TOWN (KINGDOM OF SAUDI ARABIA) - A SURVEY BASED STUDY

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### ABSTRACT:

**Background:** Restoration of the missing tooth is the foremost aim of dental procedures. Implants are one of the best lines of treatment available these days for restoration of lost teeth. Recent data indicates insufficient knowledge of general population about dental implants. Hence we conducted this survey to assess the knowledge of a given population about dental implant procedures. **Materials & Methods:** A total of 162 patients reporting with dental problems were included in the study. Patients were informed about complete survey procedure and written consent was taken from each patient. A list of questionnaire was prepared for the assessment of patient's knowledge about dental implants. Questionnaires were based on assessing the demographic details of the patients and their knowledge about dental implants. Chi-square test was used to measure the level of significance. **Results:** Out of 162 patients, 64.8 % were males and about 75 % individuals were between 25 to 45 years of age. 73.5 % of individuals wanted to get their missing teeth replaced by dental implants. Only 22% of the population got knowledge of dental implants through dental practitioners. **Conclusion:** Limited knowledge exists among persons about dental implant procedures. Very limited part of this awareness is provided by dentists.

**Key Words:** Awareness, Dental Implants, Knowledge

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## INTRODUCTION

Dentistry in the present scenario aims the restoration of patient's normal function, aesthetics, verbal command and oral health. One of the lines of treatment which matches most of these criteria is the implant dentistry. Although removable prosthesis have proven to be very effective, but in patients with severely resorbed ridges, dental implants forms the main line of treatment. Results of past studies confirms the success of dental implants in treatment of edentulous areas.<sup>[1-4]</sup> Recent increase in use implants in restorative dentistry may be due to a increased of awareness of dental implant as an effective replacement for missing teeth.<sup>[5-8]</sup> Results of the previous studies show that level of awareness about implants ranged from 66.4% to 77%, while in Nigeria, it was 22.6% and 7.2% among patients and health workers respectively.<sup>[9-10]</sup> Hence, this study was planned to assess the awareness of implant and information sources among

the people of Alkharj town, and also about limitations for the implant treatment.

## MATERIALS & METHODS

The ethical approval was taken before the starting of the survey. A total of 162 patients reporting in the hospital in Alkharj town with dental problems were included for the study. A list of questionnaire was prepared for the assessment of patient's knowledge about dental implants. Patients were pre-informed about the complete protocol of the study. The questions were based on the demographic data, such as age, sex, education level of the patients etc. the questionnaire form was taken and modified from data used by Pommer et al in their study.<sup>[11]</sup> The questionnaires were given to the subjects during their initial visit. The data collected was analysed by SPSS software. Chi-square test was used to measure the level of significance.

**QUESTIONNAIRE**

- 1) **Sex:** a) Male;                      b) Female:
- 2) **Age:** 20 – 40
- 3) **What is your level of education:** a) Primary level; b) secondary level; c) university level
- 4) **Do you have any missing teeth:** a) Yes;                      b) No
- 5) **If yes, than tooth is lost due to:** a) Caries;                      b) periodontal diseases; c) trauma
- 6) **Do you plan to replace missing teeth:** a) Yes                      b) No
- 7) **If yes, you will replace the teeth with:** a) Removable prostheses; b) fixed prostheses
- 8) **Have you heard of implant:** a) Yes                      b) No
- 9) **Do you know about replacing teeth with implant:** a) Yes                      b) No
- 10) **From where did you got the information about implant:** a) Newspaper; b) Internet; c) Friends; d) Dentist; e) Patients
- 11) **What information you received:** a) Costly to place; b) Difficult to place; c) Not useful as other treatment; d) Fear of success; e) Risk of surgery
- 12) **Do you want to know more about implant treatment:** a) Yes; b) No
- 13) **If yes , would you like to replace your teeth with implant:** a) Yes; b) No

**RESULTS**

A total of 162 patients were included for this survey. The results are enlisted in **Table 1-13**. Out of 162 patients, 105 were males and 57 were females. As far as age is concerned, 41 were between 20 to 25 years of age, 67 individuals were between 25 to 35 years of age. Majority

of the individuals (78) were university graduates. 160 candidates wanted to get their missing teeth replaced out of which 119 candidates wanted to get it replaced by dental implants. Only 36 individuals got information about dental implants by dental practitioners. 158 individuals wanted to know more about dental implants.

**Table 1:** Gender

Parameters	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	105	64.8	64.8	64.8
female	57	35.2	35.2	100.0
Total	162	100.0	100.0	

**Table 2:** Age

Parameters	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 20-25	41	25.3	25.3	25.3
25-35	67	41.4	41.4	66.7
35-45	54	33.3	33.3	100.0
Total	162	100.0	100.0	

**Table 3:** Education

Parameters	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Intermediate	5	3.1	3.1	3.1
Secondary	60	37.0	37.0	40.1
University	78	48.1	48.1	88.3
Others	19	11.7	11.7	100.0
Total	162	100.0	100.0	

**Table 4:** Missing tooth Status response

Parameters	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	161	99.3	99.3	99.3
no	1	.7	.7	100.0
Total	162	100.0	100.0	
Total	162	100.0		

**Table 5:** Missing tooth Etiology response

Parameters		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	caries	107	66.0	66.5	66.5
	periodontal disease	32	19.8	19.9	86.3
	trauma	14	8.6	8.7	95.0
	others	9	5.6	4.9	100.0
	Total	162	100.0	100.0	
Total		162	100.0		

**Table 6:** Missing tooth replacement response

Parameters		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	161	99.3	99.3	99.3
	no	1	.7	.7	100.0
	Total	162	100.0	100.0	
Total		162	100.0		

**Table 7:** Response to Missing tooth replacement type

Parameters		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fixed Protheses	149	91.9	91.9	91.9
	Removable protheses	13	8.1	8.1	100.0
	Total	162	100.0	100.0	
Total		162	100.0		

**Table 8:** Awareness towards dental implant as for replacing missing tooth

Parameters		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	119	73.5	75.5	75.5
	no	43	26.5	24.5	100.0
	Total	162	100.0	100.0	
Total		162	100.0		

**Table 9:** Source of information for implant therapy

Parameters		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	newspaper	4	2.5	3.3	3.3
	internet	2	1.2	1.6	4.9
	friends	20	12.3	16.4	21.3
	dentist	36	22.2	29.5	50.8
	patients	100	61.8	49.2	100.0
	Total	162	100.0	100.0	
Total		162	100.0		

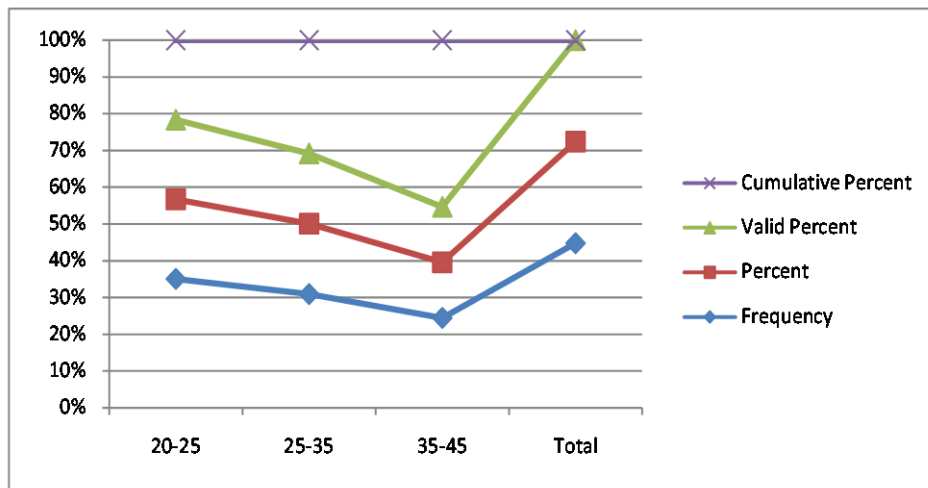
**Table 10:** Response to economical outlook for implant therapy

Parameters		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	costly to place	127	78.5	71.8	71.8
	difficult to place	25	15.4	20.2	91.9
	fear of success	2	1.2	1.6	93.5
	risk of surgery	8	4.9	6.5	100.0
	Total	162	100.0	100.0	
Total		162	100.0		

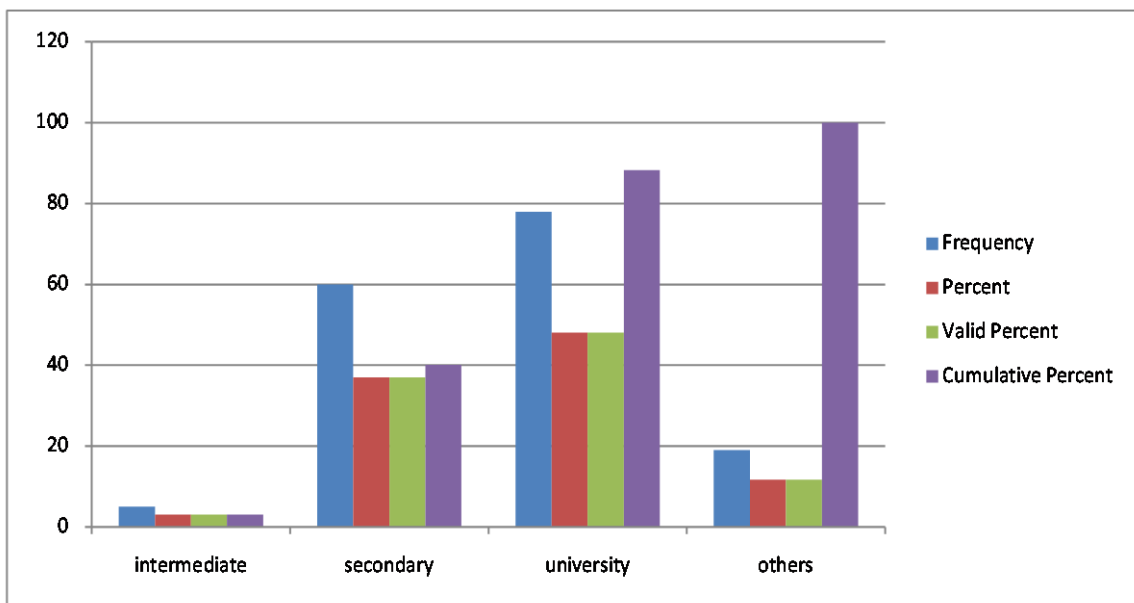
**Table 11:** Response to choice of implant therapy for restoring missing teeth

Parameters		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	161	99.3	99.3	99.3
	no	1	.7	.7	100.0
	Total	162	100.0	100.0	
Total		162	100.0		

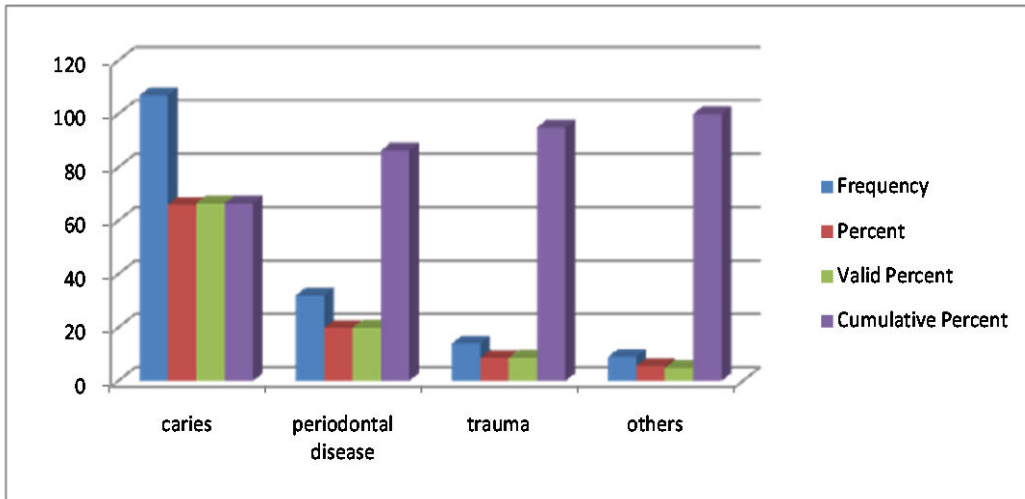
**Graph 1:** Age Distribution



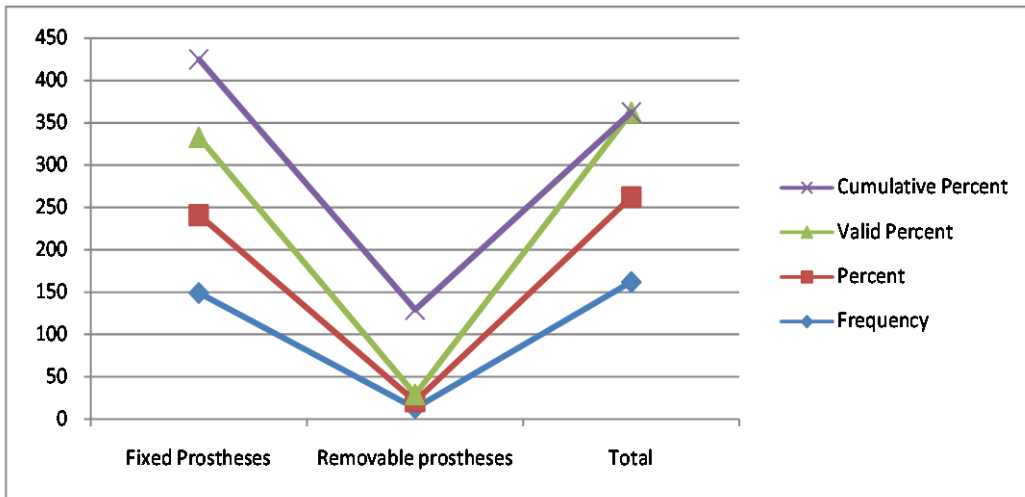
**Graph 2:** Educational Levels



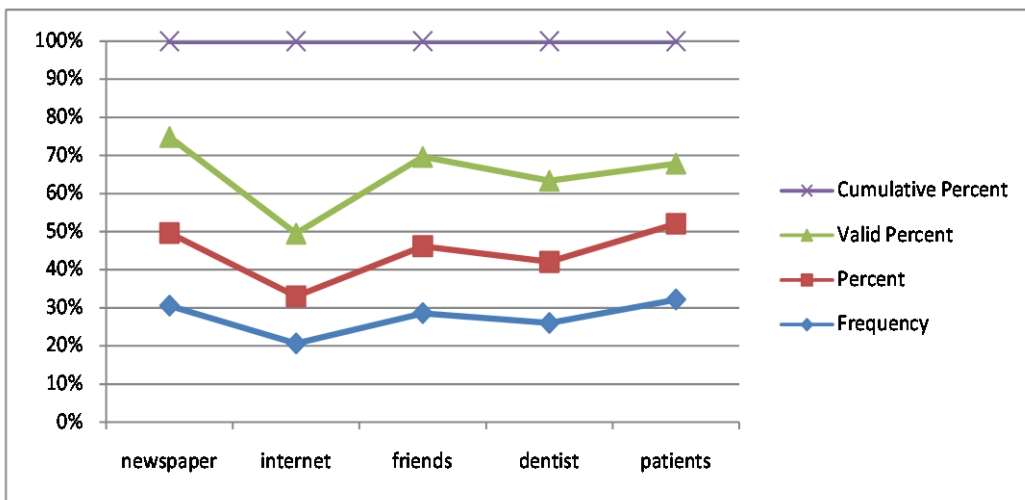
**Graph 3:** Missing tooth Etiology response

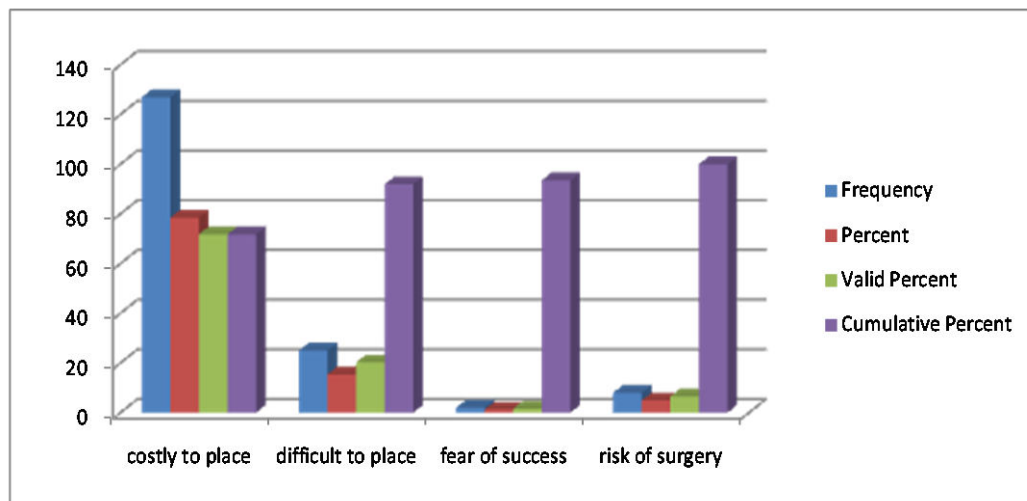


**Graph 4:** Response to Missing tooth replacement type



**Graph 5:** Source of information for implant therapy



**Graph 6:** Response to economical outlook for implant therapy

## DISCUSSION

Efficacy and outcome of dental implants have been confirmed by various studies conducted ever since the introduction of dental implants. Initially, these dental implants were used in dentistry with the aim of restoration treatment of edentulous ridges. But with time, their use has entered a wide range of spectrum including prosthetic treatment of partially edentulous areas. All these things have led to wide acceptance of dental implants throughout the world.<sup>[12-14]</sup> Therefore, in today's scenario, it is important to know the knowledge and awareness of patients towards the use of dental implants for treatment. Knowing about patient's attitude and knowledge about dental implants can so that any negative factors and misconceptions regarding dental implants in the patient's mind can be removed.<sup>[15]</sup> Therefore, this survey was conducted among the population of Alkharj town to assess the awareness of people about dental implants. The survey was based on a simple questionnaire form which was given to patients attending the clinics.

In the present study, out of total 162 patients, 64.8% were males and rest were females (Table 1). Majority of the subjects were between 2 to 35 years of age (Table 2 and Graph 1). Approximately 50% of the individuals included in the study were university graduates (Table 3 and Graph 2). This might be due to the fact that younger and educated population is more aware of the newer technologies emerging these days in medical field.<sup>[15]</sup>

About 99% of the study population had missing tooth (Table 4). Most common reason for the loss of tooth was dental caries (Table 5 and Graph 3). 99 % of the subjects wanted to get their missing teeth, if any, restored. This shows patients concern for their functional and aesthetic rehabilitation (Table 6). About 92 % of the subjects in the present study favoured replacement of their missing teeth by a fixed prosthesis rather than by a removable prosthesis (Table 7 and Graph 4). Saloen et al. also reported a low rate of awareness (29%) of dental implant treatment procedures among a given population

in Finland.<sup>[16]</sup> Although a major percent of population in the present study preferred removable prosthesis as a line of treatment for the replacement of missing teeth, majority of the subjects were well aware of the implants treatment available these days (Table 8). One of the important aspects about awareness of implants is the source of knowledge. Majority of the subjects gained information about implant restorative dentistry through other patients (62.8%) (Table 9 and Graph 5). Most of the subjects considered implant treatment to be very costlier as compared to other restorative treatments (Table 10 and Graph 6). After getting information, more than 95% of the subjects preferred implants for restoring their missing teeth (Table 11). Only 22 % of the patients gained knowledge from dental practitioners. Zimmer et al in their survey observed that more than 75 % of the patients gained knowledge about dental implants through media whereas dentists formed a very small group of population spreading awareness.<sup>[8]</sup>

In a similar study by Akagawa and associates contributed less than 20% of the information about dental implants.<sup>[17]</sup> More than 95 % of the population were willing to know about dental implants. After getting knowledge about implants, 93% of the subjects preferred getting implants treatment for replacement of missing teeth. Al-Johany et al in their survey observed that about 82% of the dental patients wanted to know more about dental implants. These results indicate that there is real need for the dentists to educate the general population about implant treatment.<sup>[18]</sup>

Pragati et al conducted a survey to determine the level of awareness of implants among general population and their willingness for getting such restorative treatment. They observed that out of all the patients in their study group, less than 40 % subjects knew about implants as a line of treatment. They concluded that efforts made by dentist for spreading information about dental implants are not up to the mark.<sup>[15]</sup> Tomruk et al also assessed patients' knowledge and awareness about dental implants in a Turkish subpopulation and observed that awareness of patients about implants was less than 30%. They

concluded that the dental practitioners should provide more information to the patients about dental implants supported treatment procedures.<sup>[19]</sup> Chowdhary et al did a nationwide survey to assess the knowledge and awareness of India's urban population about dental implants. From the results, they concluded that concluded that only 23.24% of the Indian urban population knew about dental implant procedures emphasizing on the need for spreading more information about dental implants in general population.<sup>[20]</sup> Therefore, Dentists should take necessary steps through dental education programs for increasing the awareness of dental implant based restorative treatment among general population.

## CONCLUSION

From the results, we conclude that there is very limited awareness about implant supported dental treatment procedures. Also, the amount of information imparted by dental practitioners to the general population is very limited. Therefore, dentists should promote dental education emphasizing the importance of dental implants. Further researches are advocated to with larger study group and more parameters to increase knowledge of patients towards dental implants.

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